FE291

Diagram No. 8202-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey Field Examination

Field No. RA-5-2-86

Registery No. FE-291

LOCALITY

State Alaska

General Locality Seymour Canal

Sublocality West of Tieldeman Island

19 86

CHIEF OF PARTY
CAPT C.W. Fisher

LIBRARY & ARCHIVES

DATE July 7, 1987

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

FE291

Area 5
CHT
1/7360 ? COPIED
1/7300 SIGN OFF ON
FORM on back

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC TITLE SHEET

REGISTER NO.

FE-291

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

RA 5-2-86

State Alaska

General locality Seymour Canal

Locality West of Tiedeman Island

Scale 1:5,000 Date of survey 3 November 1986

Instructions dated 14 March 1985 Project No. OPR-0179-RA-85

Vessel NOAA Ship RAINIER

Chief of party Capt. C.W. Fisher

Surveyed by LT G. White, AST J. SEITZ

Soundings taken by echo sounder, ~~hand lead, pole~~

Graphic record scaled by Ship's Personnel

Graphic record checked by Ship's Personnel

Verification by A.A. Luceno Automated plot by PMC Xynetics Plotter

Evaluation by A.A. Luceno

Soundings in fathoms feet at ~~MLW~~ MLLW

REMARKS: Marginal notes in black by Evaluator. Separates are filed with the hydrographic data.

STANDARDS CK'D 7-11-87
Cloy

NWOS & SURF ✓ SSV 7/21/87

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1978-665-010-1174

A. PROJECT

A special investigation was performed in accordance with Project Instructions OPR-0179-RA-85, dated March 14, 1985.

This investigation was conducted in order to provide adequate data to supersede a prior survey sounding which is in disagreement with survey H-10174, performed in the Spring of 1985 by RAINIER. RAINIER was provided a copy of the final smooth sheet and verifier's report by Nautical Chart Branch. The copy of the smooth sheet had several items marked as areas which needed further development. RAINIER was then informed by Operations Branch, Rockville, that no additional work would be required on these items. However, any of these items could be investigated at RAINIER's discretion.

A 17.5 fm prior survey sounding on the north end of the west side of Tiedeman Island was the only offshore item marked, and was determined by RAINIER to be the only item which warranted further work.

The investigation was performed concurrently with RAINIER's fall project in north Seymour Canal.

The investigation was performed on November 3 (DN 307).

The following changes to the instructions were in effect: Change No. 1, dated March 26, 1985, Change No.2, dated September 27, 1985, Change No. 3, dated January 27, 1986, Change No. 4, dated ~~July 15~~ June 24, 1986, Change No. 5, dated September 16, 1986.

B. AREA SURVEYED

This investigation was performed in Seymour Canal, Alaska, near Windfall Harbor, on the west side of Tiedeman Island. The limits of the investigation are:

57/50/30 W 134/11/54 N	to	57/50/50 W 134/12/30 N

C. SOUNDING VESSEL

All data were acquired by survey launch RA-4 (EDP 2124). No unusual vessel configurations were used.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDING

All data were acquired using Raytheon DSF 6000N echo sounder (serial number A103N).

The data were corrected for the velocity of sound through the water using data acquired using a Plessy/Grundy sound velocity sensor (SV) (serial number 3444).

Velocity corrections were computed based on sound velocity cast five, made on November 4 (DN 308). These values are tabulated in velocity table three.

Tidal data were continuously acquired from October 5 (DN 278) to November 4 (DN 308) at the Tiedeman Island tide gage site (945-2164).

The final sheet was plotted using predicted tides on Juneau, Alaska with a time corrector of +10 minutes for both high and low water. The heights were multiplied by a ratio of 0.94.

A request for smooth tides has been filed.

For further information on corrections to echo sounding, refer to "Corrections to Echo Sounding Report, OPR-0179-RA-86".

E. HYDROGRAPHIC SHEETS

All hydrograhic sheets were plotted using the Hydroplot system, at the scale of 1:5,000.

The field records will be forwarded to N/MOP2, Program Sevices Division, PMC.

F. CONTROL STATIONS

Two existing control stations were recovered and used for this investigation, WEED (1983) and TIED (1983). Both stations were used during the initial survey last fall.

G. HYDROGRAPHIC POSITION CONTROL

Motorola Mini-Ranger III positioning equipment was used for hydrographic position control. The following equipment were used:

Device	Serial Number
Console	715
R/T Unit	911615
Code A	1845
Code 1	B1108

The operation of the equipment was checked by a Fixed Point Observation critical system check.

For further information regarding base line calibrations and other specifics, refer to "Electronic Control Report, OPR-0179-RA-86".

H. SHORELINE

This investigation was entirely offshore, and no shoreline verification was performed. An outline of the shoreline has been transferred to the final sheet in order to provide a frame of reference.

I. CROSSLINES

Crosslines totaling 1.1 nautical miles or 9.5% of the total mainscheme were run. All depths at intersections were in good agreement, and no discrepancies were found.

J. JUNCTIONS

The investigation is entirely within the limits of survey H-10174, and the soundings in the investigation area are in agreement with the soundings from the survey.

K. COMPARISON WITH PRIOR SURVEYS

As mentioned in section A, this investigation is a development in an area of 47 to 48 fm depths in which a prior survey sounding of 17 fm is located. The source of this sounding is survey H-2001, dated 1889, at the scale of 1:80,000.

The investigation consisted of 25 meter splits and three crosslines covering an area 600 meters by 600 meters, centered on the location of the prior sounding. No evidence of any shoaling was found. Bottom coverage with the wide beam of the DSF 600N echo sounder was 200%, and coverage with the narrow beam was 50%. ✓

L. COMPARISON WITH THE CHART

This investigation was compared with chart 17300, 24th edition, dated June 15, 1985.

There is only one charted depth, 18 fm, in the area of the investigation. This depth likely originates from the 17.5 fm prior survey sounding, although it is depicted closer to the Tiedeman Island shoreline on the chart. ✓

M. ADEQUACY OF THE SURVEY

This investigation is sufficient to allow survey H-10174 to supersede survey H-2001 and remove the 17.5 fm depth brought through. ✓ concur

N. AIDS TO NAVIGATION

There are no aids to navigation in the area. ✓

O. STATISTICS

Number of Positions	Nautical Miles of Hydrography	Square Nautical Miles of Hydrography
140	12.7	0.1

✓

P. MISCELLANEOUS

No additional comments. ✓

Q. RECOMMENDATIONS

This investigation is complete and no additional field work is required. ✓ concur

For further information on this investigation, see the following reports:

"Horizontal Control Report: OPR-0179-RA-86"

"Horizontal Control Report: OPR-0179-RA-85"

"Corrections to Echo Sounding Report: OPR-0179-RA-86"

"Electronic Control Report: OPR-0179-RA-86"

Respectfully Submitted,

Michael B. Brown, ENS NOAA

Approved and Forwarded,

Carl W. Fisher, CAPT NOAA

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

NOAA SHIP RAINIER S221
1801 Fairview Avenue East
Seattle, WA 98102

November 19, 1986

TO: N/MOP21 - Thomas W. Richards

FROM: S221 - Carl W. Fisher

SUBJECT: Item Investigation ~~on~~ Survey ~~H-10174~~ FE-291

On November 3, 1986, RAINIER performed a special investigation on survey H-10174, which had been completed and submitted for verification and processing in the spring of 1985. The investigation was conducted in order to provide adequate data to supersede a prior survey sounding which is in disagreement with survey H-10174.

This item was marked by Nautical Chart Branch as needing further development along with several other items. RAINIER was informed by Operations Branch, Rockville, that no additional work was required on any of these items. However, any of these items could be investigated at RAINIER's discretion.

A prior survey sounding (17.5 fms) was brought through on the smooth sheet in an area where the RAINIER survey shows substantially deeper soundings (40 to 49 fms). This was the only offshore item marked, and was determined by RAINIER to be the only item requiring further work.

This investigation shows no evidence of shoaling in the area, and disproves the 17.5 fm prior survey sounding.

attachment

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SHEET

DATE: March 16,1987

Marine Center: Pacific

OPR: 0179

Hydrographic Sheet: H-10174 (FE-291)

Locality: Tiedman Island Vicinity, Seymour Canan, Alaska

Time Period: November 3, 1986

Tide Station Used: 945-2164 North End, Tiedman Island, AK

Plane of Reference (Mean Lower Low Water): 18.43 Ft.

Height of Mean High Water Above Plane of Reference: 14.6 Ft.

Remarks: Recommended Zoning:

Zone Direct

for Brian K. Low
Chief, Tidal Datum Quality
Assurance Section

MASTER STATION LIST
OPR-0179-RA-85
SEYMOUR CANAL, AK

VERSION 11/18/86

128 3 57 48 31951 134 10 52333 250 0005 000000
WEED, 1983

129 3 57 50 39468 134 11 27628 ~~250~~ 139 0003 000000
TIED, 1983

NOAA FORM 77-27(H)
(9-83)

U.S. DEPARTMENT OF COMMERCE

HYDROGRAPHIC SURVEY STATISTICS

REGISTRY NUMBER: FE-291

RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET		SMOOTH OVERLAYS: POS., ARC, EXCESS	
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES						
ENVELOPES	1					
VOLUMES						
CAHIERS	Note: Smooth sheets, excesses & overlays included in D.R.					
BOXES						

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS VERIFICATION	AMOUNTS EVALUATION	AMOUNTS TOTALS
POSITIONS ON SHEET			140
POSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			

	TIME-HOURS VERIFICATION	TIME-HOURS EVALUATION	TIME-HOURS TOTALS
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	2		2
VERIFICATION OF SOUNDINGS	3		3
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	8		8
COMPARISON WITH PRIOR SURVEYS AND CHARTS		6	6
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		8	8
GEOGRAPHIC NAMES			
OTHER* Digitizing (not required)			
*USE OTHER SIDE OF FORM FOR REMARKS — TOTALS	13	14	27

Pre-processing Examination by LT M. Mozgala	*Beginning Date*	*Ending Date* 12/19/86
Verification of Field Data by A. Lucero	*Time (Hours)* 8	*Ending Date* 4/17/87
Verification Check by J. Green, B. Olmstead	*Time (Hours)* 6	*Ending Date* 4/27/87
Evaluation and Analysis by A. Lucero	*Time (Hours)* 14	*Ending Date* 4/13/87
Inspection by D. Hill	*Time (Hours)* 2	*Ending Date* 4/27/87

☆ U.S. GOVT. PRINTING OFFICE 1983: 764-006/6061

PACIFIC MARINE CENTER
EVALUATION REPORT
FE-291

1. INTRODUCTION

FE-291 was accomplished by the NOAA Ship RAINIER in accordance with the following project instructions:

OPR-0179-RA-85, dated March 14, 1985
Change Number 1, dated March 21, 1985

This is a special investigation of a 17.5-fathom sounding originating from H-2001 (1889) at latitude 57°50'40"N, longitude 134°12'15"W. This sounding was carried forward to H-10174 (1985) from H-2001 (1889) during office processing. The 17.5-fathom sounding was investigated by running sounding lines at 25-meter spacing within a radius of 300 meters from the center and three crosslines at 100-meter spacing.

Predicted tides for Juneau, Alaska were used during field processing. Tide correctors used for the final reduction of soundings reflect approved hourly heights zoned directly from the Tiedeman Island, Alaska tide gage.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA, sound velocity and electronic control correctors have been verified and applied to the sounding and position data. These correctors are listed in the position/sounding printout included with the survey data.

A digital file has been generated and includes categories of information required to comply with N/CG2 Hydrographic Survey Guideline No. 23, Completion of Digital Hydrographic Surveys, September 7, 1983.

2. CONTROL AND SHORELINE

Horizontal control and hydrographic positioning are adequately discussed in sections F and G of the hydrographer's report and in the Horizontal Control Report for OPR-0179-RA-85.

The horizontal control stations used during hydrography were established in 1983 and their field values are based on the North American Datum of 1927.

3. HYDROGRAPHY

Hydrography within the limits of the sheet is adequate to:

a. Delineate the bottom configuration, determine least depths, and to draw the standard depth curves.

b. Reveal that there are no significant discrepancies or anomalies requiring further investigation.

c. Show that the survey had been properly controlled and soundings are plotted correctly.

4. CONDITION OF SURVEY

The hydrographic records and reports are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through Change No. 3, the Hydrographic Survey Guidelines, and the PMC OPORDER.

5. JUNCTIONS

None required. This survey is entirely within the limits of prior survey H-10174 (1985). H-10174 has been processed and submitted to headquarters for charting. Soundings are in agreement with those on this survey.

6. COMPARISON WITH PRIOR SURVEYS

H-10174 (1985) 1:20,000

There is good agreement in soundings between the two surveys. The 17.5-fathom sounding at latitude 57°50'40"N, longitude 134°12'15"W in general depths of 43 to 46 fathoms which was carried forward to prior survey sheet H-10174 (1985) from H-2001 (1889) was not found in this survey. The present survey is adequate to disprove the existence of the the 17.5-fathom sounding from H-2001.

There were no AWOIS items for investigation during this survey.

FE-291 disproves the existence of the 17.5-fathom sounding and may be used to supplement H-10174 if larger scale charting of the common area becomes necessary.

7. COMPARISON WITH CHART

Chart 17300, 23rd Edition, dated 1/14/84; scale 1:209,978
Chart 17360, 26th Edition, dated 8/18/84; scale 1:217,828

a. Hydrography - The charted depth, 18 fathoms, may originate from prior survey H-2001 (1889) as a rounded version of 17.5.

Geographic names appearing in the survey title are consistent with those of H-10174.

FE-291 is adequate to supersede charted hydrography within the common area.

There were no danger to navigation reports submitted to the Coast Guard or DMA for this survey.

b. Controlling depths - There are no channels with controlling depths within the limits of this survey.

c. Aids to Navigation - There are no fixed or floating aids within the limits of this survey.

8. COMPLIANCE WITH INSTRUCTIONS

FE-291 adequately complies with the project instructions

9. ADDITIONAL FIELD WORK

This is a good hydrographic field investigation. No additional field work is recommended.

Respectfully submitted,

Arsenio A. Luceno
Cartographer

This survey has been examined and it meets Charting and Geodetic Services standards and requirements for use in nautical charting. This survey is recommended for approval.

Dennis Hill

Chief, Hydrographic Section

ATTACHMENT TO DESCRIPTIVE REPORT FOR FE-291

I have reviewed the smooth plots, accompanying data, and reports of this hydrographic survey. Except as noted in the Evaluation Report, the hydrographic survey meets or exceeds Charting and Geodetic Services (C&GS) standards, complies with instructions, and is accurately and completely represented by the smooth plots and digital data file for use in nautical charting.

Thomas W. McConnell 4-30-87
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock Larry W. Mordock 4/30/87

After review of the smooth plots and accompanying reports, I hereby certify this survey is accurate, complete, and meets appropriate standards with only the exceptions as noted above. The above recommendations are forwarded with my concurrence.

Robert L. Faught 4-30-87
Director, Pacific Marine Center (Date)

ADDENDUM TO EVALUATION REPORT FOR FE-291

The Evaluation Report, Section 2, Control and Shoreline is supplemented as follows:

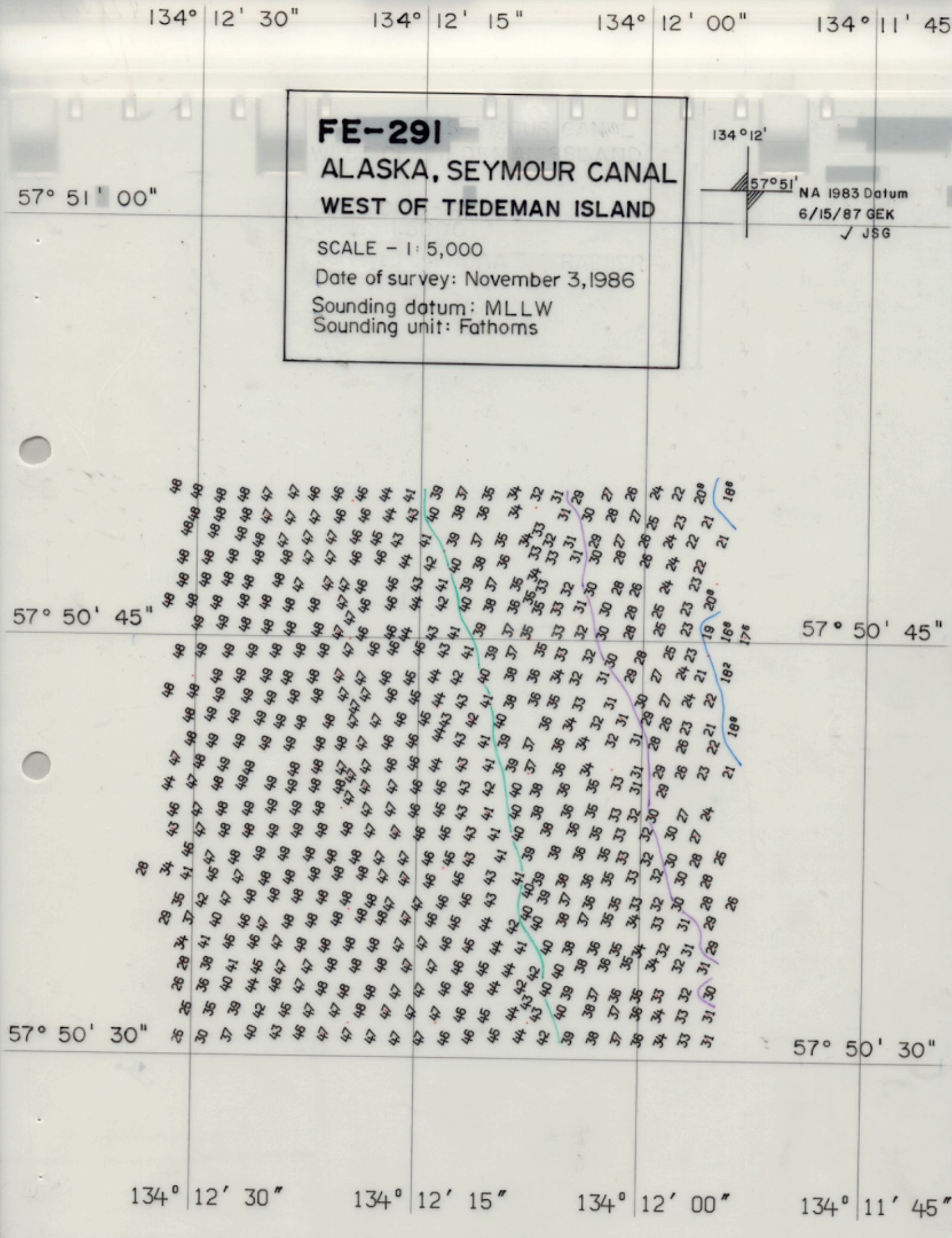
In accordance with N/CG2 memorandum, dated December 12, 1986, an NAD 83 datum adjustment tick has been added to the smooth sheet and accompanying overlays. The adjustment value was determined by N/CG121 and amounts to -1.202 seconds of latitude and +6.426 seconds of longitude for the geographic area common to this survey (NAD 27 position to NAD 83 position). Computed geographic positions contained in the survey digital file remain on NAD 27.

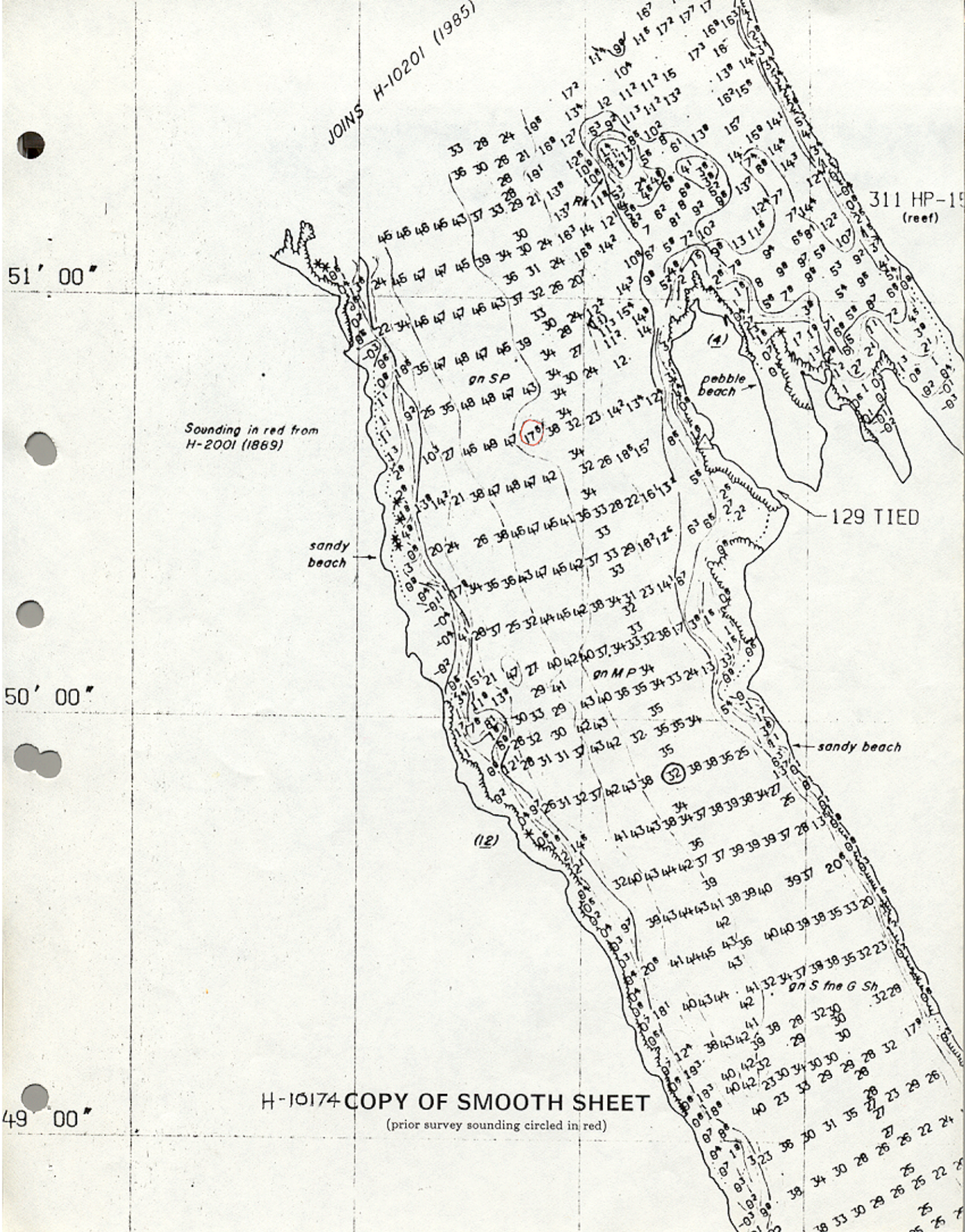
Thomas D. Williams 6/23/87
Chief, Nautical Chart Branch (Date)

CLEARANCE: SIGNATURE AND DATE:

N/MOP2:LWMordock Lawrence W. Mordock 6/23/87

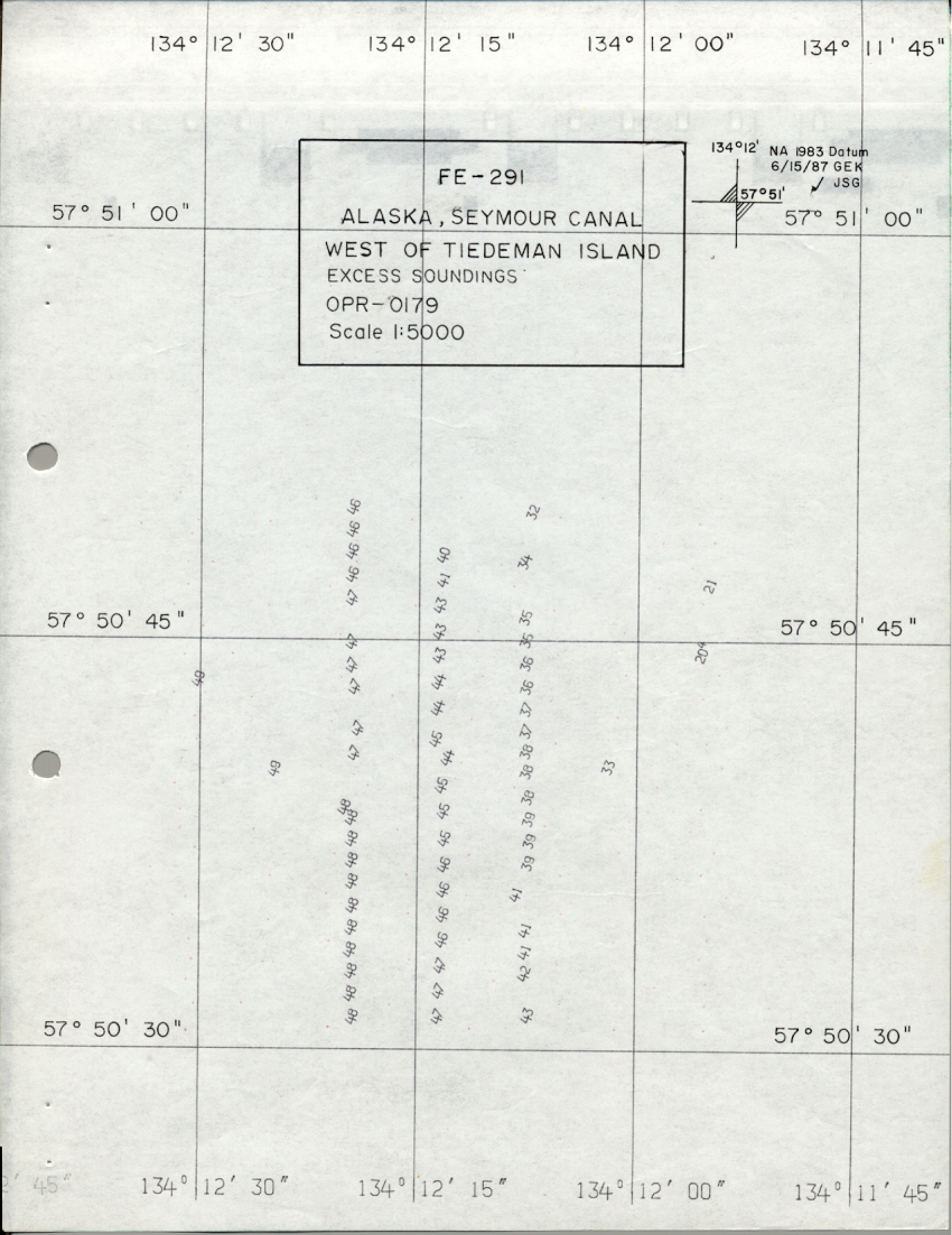
Approved: Robert L. Saudek 6-23-87
Director, Pacific Marine Center (Date)


134° 12' 30"
134° 12' 15"
134° 12' 00"
134° 11' 45"
FE-291
ALASKA, SEYMOUR CANAL
WEST OF TIEDEMAN ISLAND
SCALE - 1:5,000
Date of survey: November 3, 1986
Sounding datum: MLLW
Sounding unit: Fathoms
134°12'
57°51'
NA 1983 Datum
6/15/87 GEK
✓ JSG
57° 51' 00"
57° 50' 45"
57° 50' 30"



H-10174 COPY OF SMOOTH SHEET

(prior survey sounding circled in red)


134° 12' 30"
134° 12' 15"
134° 12' 00"
134° 11' 45"
FE-291
ALASKA, SEYMOUR CANAL
WEST OF TIEDEMAN ISLAND
EXCESS SOUNDINGS
OPR-0179
Scale 1:5000
134°12'
57°51'
NA 1983 Datum
6/15/87 GEK
JSG
57° 51' 00"
57° 50' 45"
57° 50' 30"

134° 12' 30" 134° 12' 15" 134° 12' 00" 134° 11' 45"

FE-291

ALASKA, SEYMOUR CANAL

WEST OF TIEDEMAN ISLAND

POSITIONS
OPR-0179
Scale 1:5000

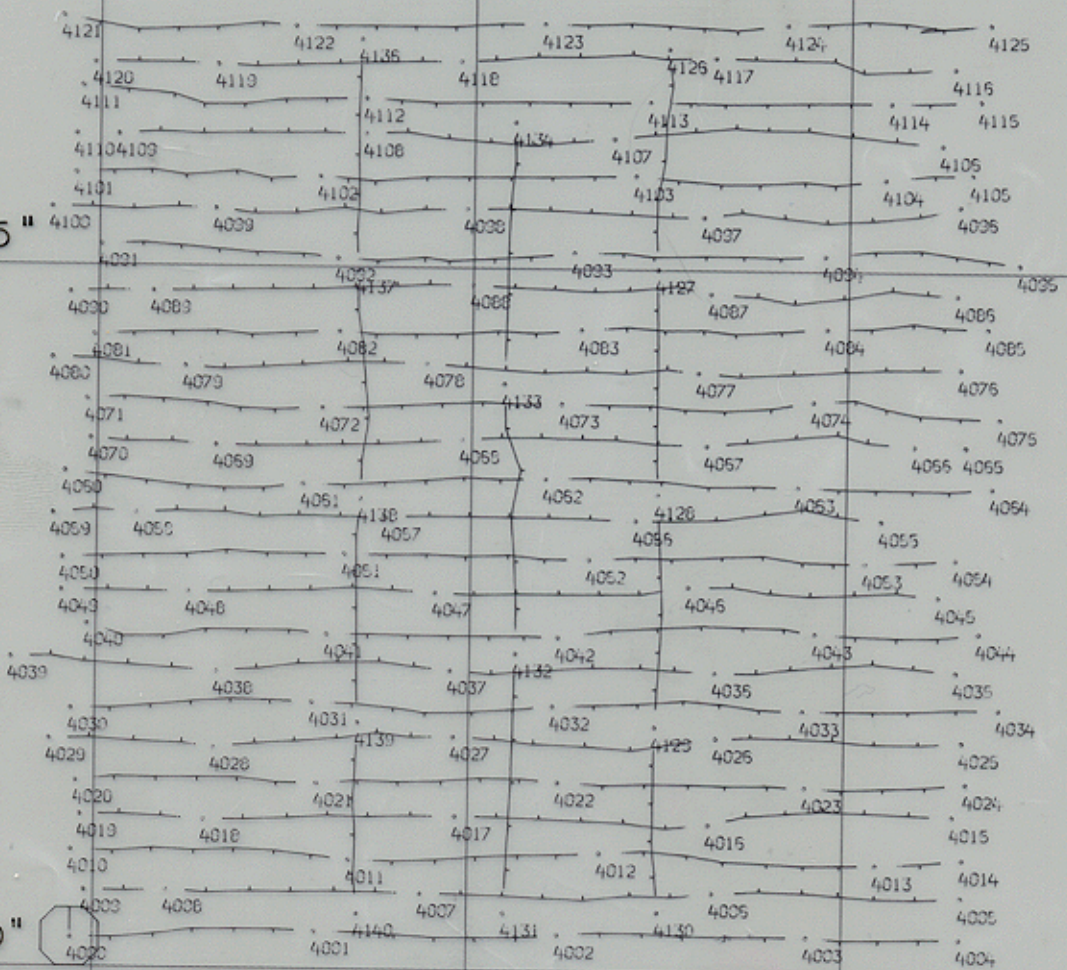
134°12'
57°51'

NA 1983 Datum
6/15/87 GEK
✓ JSG

57° 51' 00"

57° 50' 45"

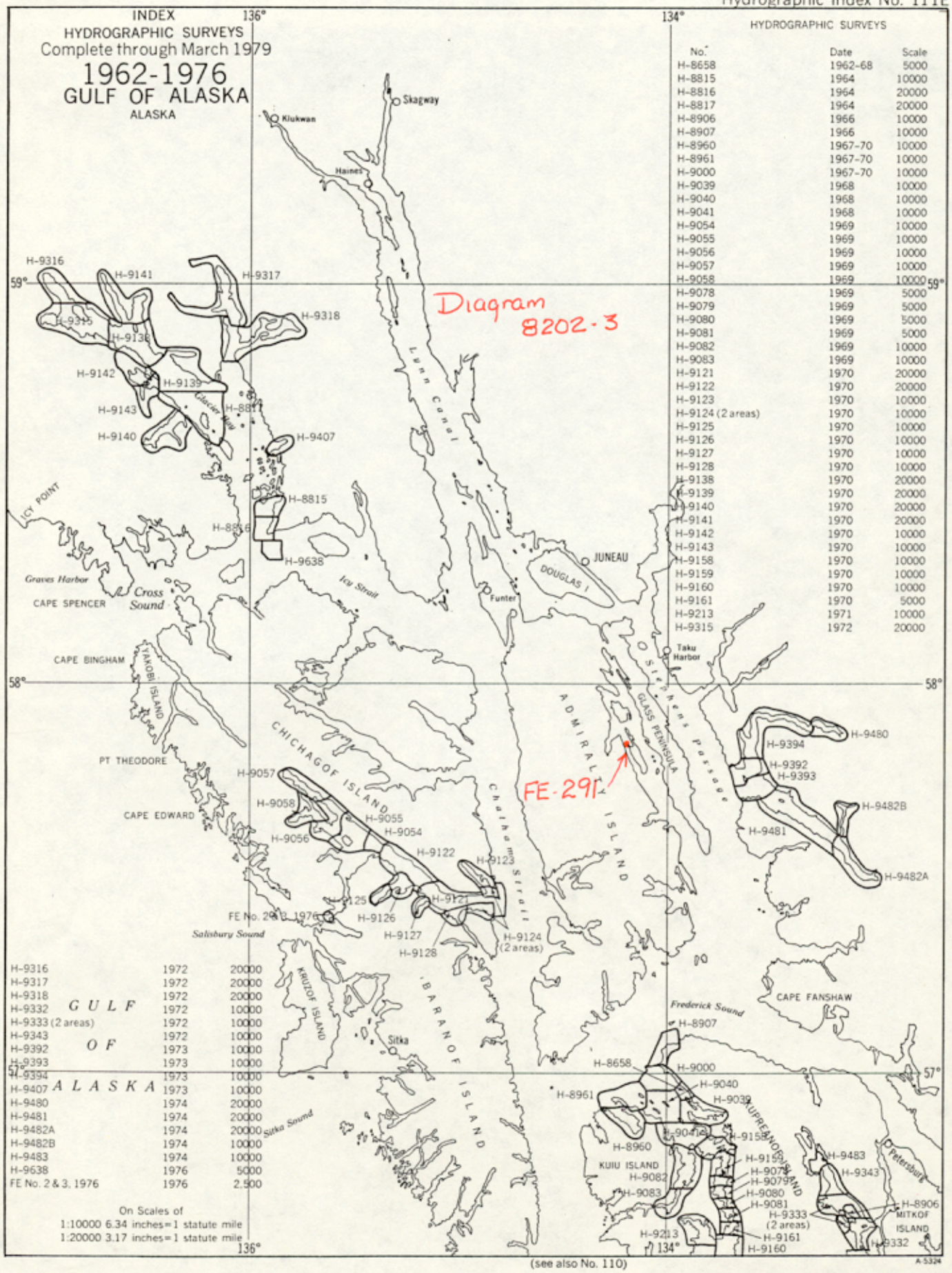
57° 50' 30"



134° 12' 30" 134° 12' 15" 134° 12' 00" 134° 11' 45"

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

Hydrographic Index No. 111E



No.	Date	Scale
H-8658	1962-68	5000
H-8815	1964	10000
H-8816	1964	20000
H-8817	1964	20000
H-8906	1966	10000
H-8907	1966	10000
H-8960	1967-70	10000
H-8961	1967-70	10000
H-9000	1967-70	10000
H-9039	1968	10000
H-9040	1968	10000
H-9041	1968	10000
H-9054	1969	10000
H-9055	1969	10000
H-9056	1969	10000
H-9057	1969	10000
H-9058	1969	10000
H-9078	1969	5000
H-9079	1969	5000
H-9080	1969	5000
H-9081	1969	5000
H-9082	1969	10000
H-9083	1969	10000
H-9121	1970	20000
H-9122	1970	20000
H-9123	1970	10000
H-9124 (2 areas)	1970	10000
H-9125	1970	10000
H-9126	1970	10000
H-9127	1970	10000
H-9128	1970	10000
H-9138	1970	20000
H-9139	1970	20000
H-9140	1970	20000
H-9141	1970	20000
H-9142	1970	10000
H-9143	1970	10000
H-9158	1970	10000
H-9159	1970	10000
H-9160	1970	10000
H-9161	1970	5000
H-9213	1971	10000
H-9315	1972	20000
H-9316	1972	20000
H-9317	1972	20000
H-9318	1972	10000
H-9332	1972	10000
H-9333 (2 areas)	1972	10000
H-9343	1973	10000
H-9392	1973	10000
H-9393	1973	10000
H-9394	1973	10000
H-9407	1973	10000
H-9480	1974	20000
H-9481	1974	20000
H-9482A	1974	20000
H-9482B	1974	10000
H-9483	1974	10000
H-9638	1976	5000
FE No. 2 & 3, 1976	1976	2,500

On Scales of
1:10000 6.34 inches = 1 statute mile
1:20000 3.17 inches = 1 statute mile

(see also No. 110)

A 5324

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-291

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
17300 S.P./8m	3/6/90	ALMACEN	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. One (1) sndg. applied.
17360	5-31-90	John Pierce	Full ~~Part Before~~ After Marine Center Approval Signed Via
			Drawing No. 32 Appd thru 17300 (H-10179)
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.